

ABSTRACT OF THE DISCLOSURE

A combustor for a gas powered turbine which employs a heat exchanger and a catalyst to combust a fuel without the emission of undesired chemical species. A gas powered turbine requires expanding gases to power the turbine blades. Fuel is combusted to produce the required gases. A catalyst is employed to lower the combustion temperature of the fuel. The catalyst is placed on a set of tubes in the heat exchanger such that a portion of the thermal energy may be transferred to the air before it engages the catalyst. After encountering the catalyst, the combusted fuel increases the temperature of the air to an auto-ignition temperature so that no other ignition source is needed to combust additional fuel.